ACNE-RELATED PIH

Ensure optimal outcomes in post-inflammatory hyperpigmentation.

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Persistent pigmentation and erythema in acne are common problems that can cause distress to patients for much longer than acne itself. Lighter-skinned patients frequently develop erythema and sometimes pigmentation in areas where they once had acne lesions, while dark-skinned patients typically present with dyschromia; erythema may be present, but difficult to appreciate.1

AVAILABLE TREATMENTS

While facial acne has a significant psychological impact and is associated with depression,2 facial erythema, scars, and dyschromia have their own psychosocial effects. Research suggests that facial lesions, including scars and birthmarks, negatively impact individuals’ performance in job interviews.3 Early, effective acne therapy to prevent the development of post-inflammatory hyperpigmentation (PIH), erythema, and scarring is imperative. The most common prescription medications to treat acne-related PIH include retinoids, azelaic acid, and hydroquinone.4-7

Retinoids. Topical retinoids normalize follicular hyperkeratosis and reduce inflammation through their influence on toll-like receptors.8 They help accelerate cell turnover and consequently reduce melanin content in the stratum corneum. They also may interfere with melanosome transfer of melanin to keratinocytes.9 Finally, thinning the stratum corneum can lead to enhanced penetration of other, concurrent topical lightening agents. Tretinoin 0.1% (Retin-A Micro, Valeant) cream has been demonstrated to be effective for hyperpigmentation as monotherapy and in combination with hydroquinone.9,10 Other topical retinoids, including tazarotene (Tazorac, Allergan) and adapalene (Differin, Galderma), likely help pigmentation by similar mechanisms.

Azelaic acid. Azelaic acid (AzA) is a dicarboxylic acid. Used commonly for the treatment of rosacea (and some cases of acne), it possesses cytotoxic and anti-proliferative effects, in addition to anti-tyrosinase effects.6 Available as a 15% gel (Finacea, Bayer) or 20% cream (Azelex, Allergan), its use for hyperpigmentation is off-label. Azelaic acid may be used as monotherapy or in combination with other agents such as topical retinoids. Skin irritation is a concern when using azelaic acid, but it usually resolves with continued use.

Hydroquinone. Hydroquinone inhibits the activity of tyrosinase and may be considered the gold standard of skin lightening drugs.9 Irritation potential may limit its use, as this may subsequently lead to PIH. The risk of developing exogenous ochronosis precludes the use of long-term use. Effective as monotherapy, hydroquinone is commonly combined with other agents, such as topical retinoids.

EDUCATE AND COMMUNICATE

Topical lightening creams are only effective if patients adhere to the regimen. For that reason, patient education is essential to attain success. PIH from product irritation of the skin must be avoided. Ideally, only hyperpigmented lesions should be treated to prevent lightening of normal skin from hydroquinone. This may be challenging, depending on the extent of pigmentation of the skin. A small amount of medication should be applied to reduce risk of irritation. (Usually a pea-sized amount is enough to cover the entire face.) If the goal is twice-daily application, then initially, evening or every-other-evening regimens should be employed and gradually advanced as tolerated.

Strict sunscreen use is critical to avoid UV-induced pigmentation of the skin. Finally, setting appropriate expectations is essential for success in the topical treatment of PIH. Improvement may not be obvious until after several months of continuous topical therapy.

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